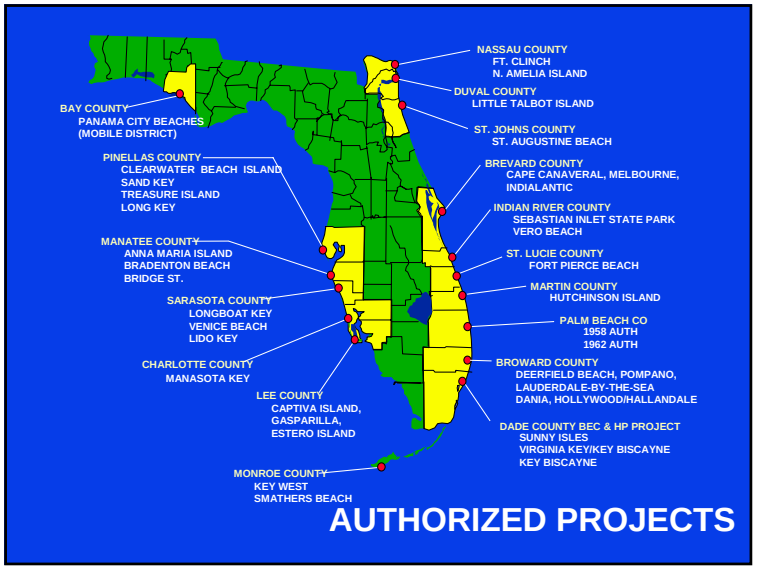
Presentation of:
Dade County Beach Erosion Control
and Hurricane Protection Project

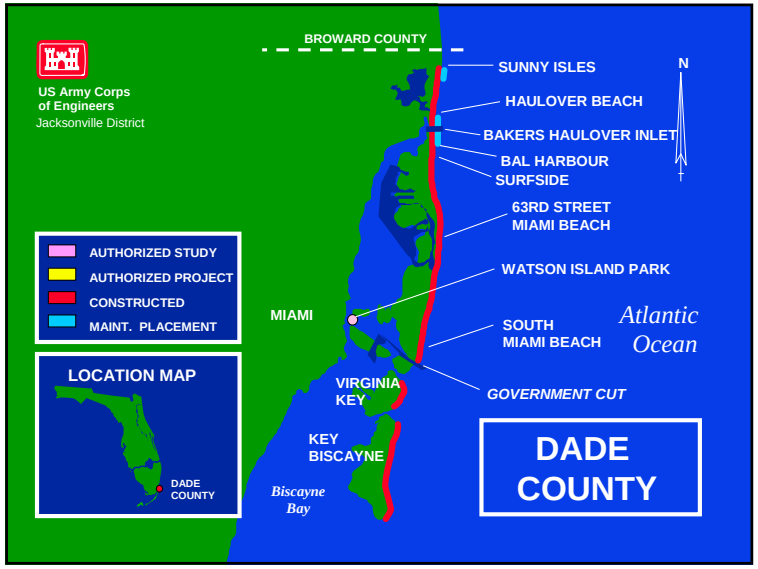
north MIAMI BEACH RENOURISHMENT

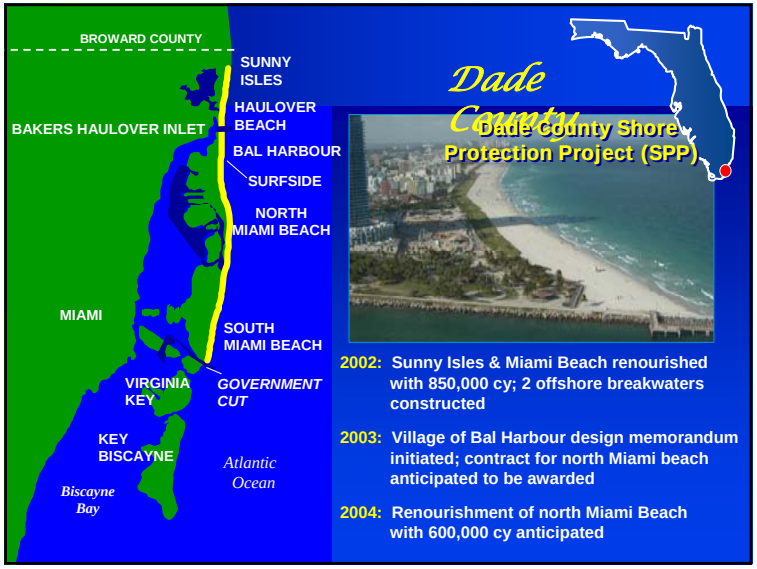
Presented by: Charlie Stevens, P.M.

U. S. ARMY CORPS OF ENGINEERS
COASTAL/NAVIGATION ANTILLES BRANCH



AUTHORIZED PROJECTS

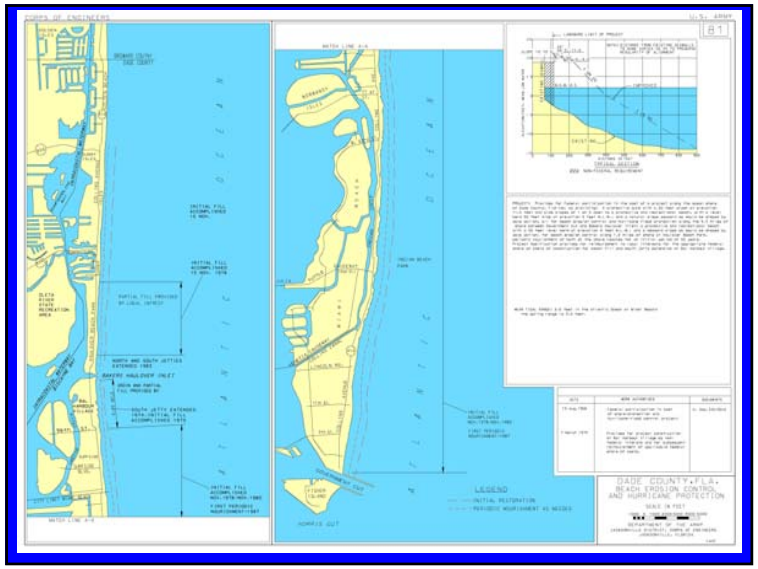




2002: Sunny Isles & Miami Beach renourished with 850,000 cy; 2 offshore breakwaters constructed

2003: Village of Bal Harbour design memorandum initiated; contract for north Miami beach anticipated to be awarded

2004: Renourishment of north Miami Beach with 600,000 cy anticipated



Dade County, Florida, Beach Erosion Control & Hurricane Protection Condition of Improvement, 30 September 1996

ACTS	WORK AUTHORIZED	DOCUMENTS
13 Aug 1968	Federal participation in cost of shore-protection and hurricane-flood control project.	H. Doc.335/90/2
3 Mar 1974	Provides for project construction at Bal Harbour Village by non-Federal interests and forsubsequent reimbursement Federal share.	———
2 Jul 1985 and WRDA 1986	Federal participation in cost of shore proection north of Haulover Beach Park (Sunny Isles).	H. Report 99-236 & P.L. 99-662

PROJECT: Provides for Federal participation in the cost of a project along the ocean shore of Dade County, Florida, by providing: A protective dune with a 20 feet crown at elevation 11.5 feet and side slopes of 1 on 5 down to a protective and recreational beach, with a level berm 50 feet wide at elevation 9 feet M.L.W., and a natural slope seaward as would be shaped by wave action, all for beach erosion control and hurricane flood protection along the 9.3 miles of shore between Government Cut and Bakers Haulover Inlet; a protective and recreational beach with a 50 feet level berm at elevation 9 feet M.L.W., and a seaward slope as would be shaped by wave action, for beach erosion control along 1.2 miles of shore at Haulover Beach Park, periodic nourishment of both of the above reaches for an initial period of 50 years. Project modification provides for reimbursement to local interests for the appropriate federal share of costs of construction for beach fill and south jetty extension at Bal Harbour Village.

SPONSOR: Metropolitan Dade County
Board of County Commissioners
33 SW. 2nd Avenue, Suite 500
Miami, Florida 33130

Dade County Beach Erosion Control and Hurricane Protection Project

- Section 935 WRDA 1986 and FY 1999 Energy and Water Appropriations bill are consistent in the requirement that domestic sources of sand must be found to be unavailable before non-domestic sources of sand are used in nourishment of a Federal Project.
- From the conference report: "The conferees direct that none of the funds provided for the Dade County, Florida, project shall be used for the acquisition of foreign source materials for the project unless the Secretary of the Army provides written certification to the Committees on Appropriations that domestic sources of materials are not available".

RFP No. DACW17-02-R-0031

US Army Corps
of Engineers
Jacksonville District

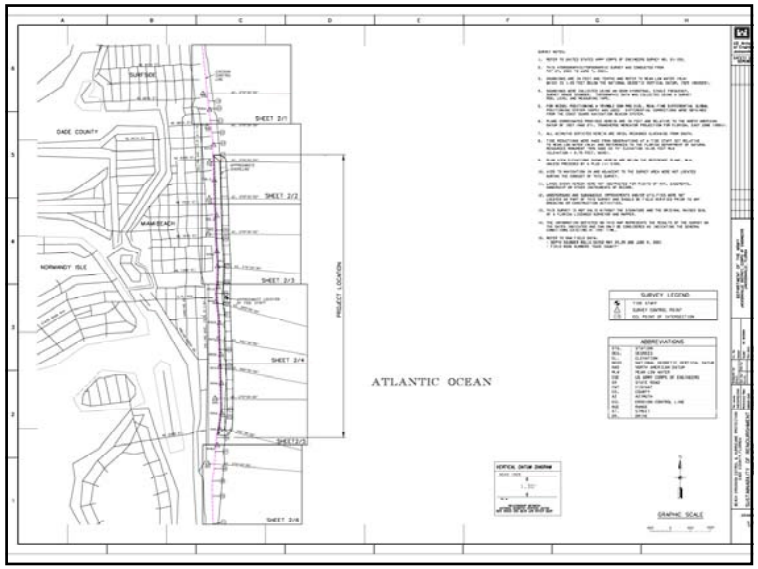
Sustainability of Renourishment, Miami Beach, Beach Erosion Control and Hurricane Protection Project

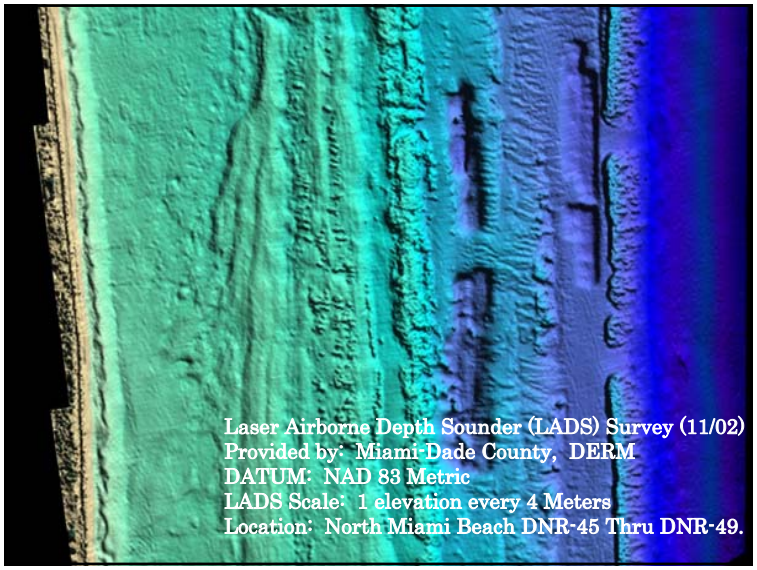
Dade County, Florida

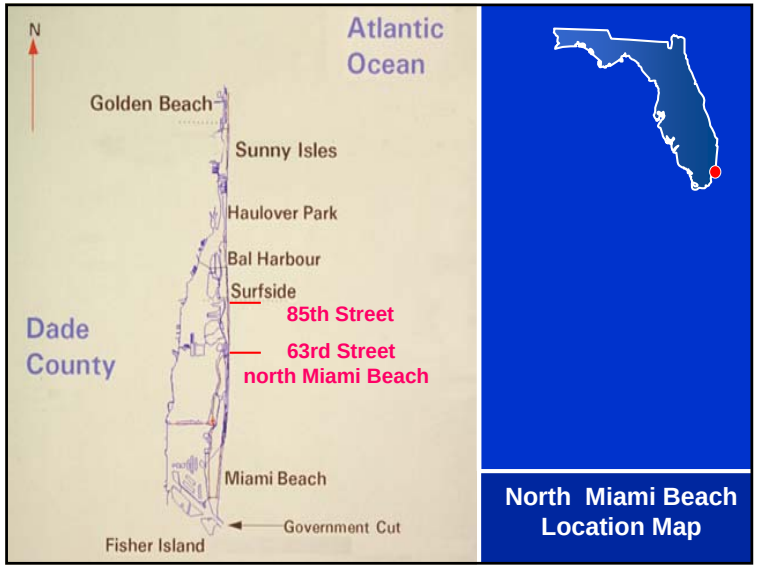
Construction Solicitation and Specifications

VALUE ENGINEERING — INCREASE PROFITS SUBMIT VECP'S

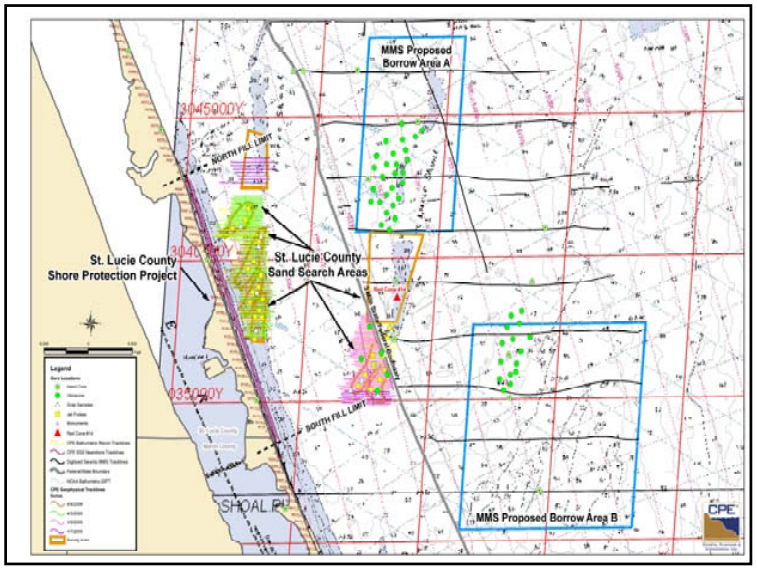
18 October 2002


ATLANTIC OCEAN


Laser Airborne Depth Sounder (LADS) Survey (11/02)
Provided by: Miami-Dade County, DERM
DATUM: NAD 83 Metric
LADS Scale: 1 elevation every 4 Meters
Location: North Miami Beach DNR-45 Thru DNR-49.


N
Atlantic Ocean
Golden Beach
Sunny Isles
Haulover Park
Bal Harbour
Surfside
85th Street
63rd Street
north Miami Beach
Dade County
Miami Beach
Government Cut
Fisher Island
North Miami Beach Location Map


DADE COUNTY
BEFORE
AFTER



2.3 CHARACTER OF MATERIAL

The character of the sand to be supplied by the Contractor shall meet the following physical specifications:

a. Composed of quartz and/or calcium carbonate with no more than 5 percent sand of other mineralogical composition.

b. The calcium carbonate sand grains allowable under this specification are naturally occurring, durable and solid calcium carbonate grains. Many calcium carbonate grains have excessive internal pore space dramatically reducing the grains density and durability. Calcium carbonate grains delivered under this specification shall be 90 percent durable and solid calcium carbonate grains. Internal pore space shall not exceed 10 percent.

(1) Whole and broken mollusk shells from the beach environment are durable and solid calcium carbonate grains. Due to the platy nature of shells and shell fragments, no more than 60 percent of the sand (quartz or calcium carbonate) shall be whole or broken shell. Unacceptable calcium carbonate grains include sand derived from benthic foraminifera, sponge spicules and halimeda.

c. Silt content (passing No. 230 sieve(0.063 mm)) of less than 5 percent.

d. The coarse grains must meet the following gradation limits:

(1) 95 percent of the material must pass the #4 sieve (4.76mm).

(2) 99 percent of the material must pass the 3/8 inch sieve (9.51 mm).

(3) 100 percent of the material must pass the 3/4 inch sieve(19.0 mm). The gravel sized material must be distributed throughout the beach fill, and not be concentrated in isolated areas.

e. Average Mean Grain Size greater than or equal to 0.30 mm (1.74phi) and less than 0.55 mm (0.86 phi).

f. Phi Standard Deviation values from 0.50 phi to 1.75 phi.

g. Free of debris, sharp rocks and pebbles, concrete rubble, clay, and organic material.

h. Sand color shall be similar to the existing beach. Based on the Munsell Soil Color Chart, color must be within the range:

HUE of: 2.5 YR, 5 YR, 7.5 YR, 10 YR, 2.5 Y, 5 Y
CHROMA of: 1, 2, or 3
VALUE of: 6, 7, or 8.

This color specification eliminates strongly colored or dark sand.